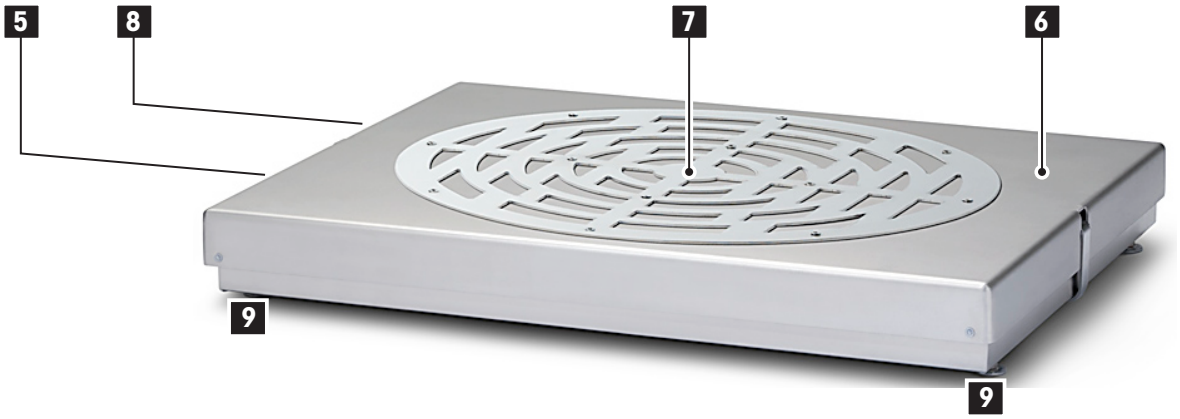
Operating Instructions Part 1

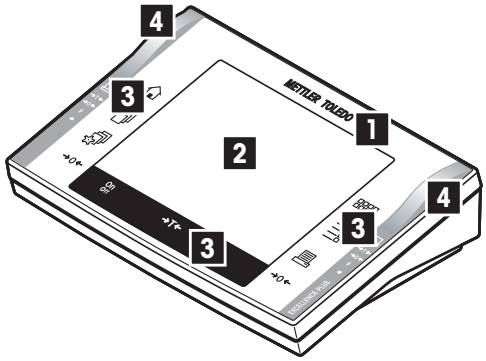
METTLER TOLEDO
XP-K Comparators

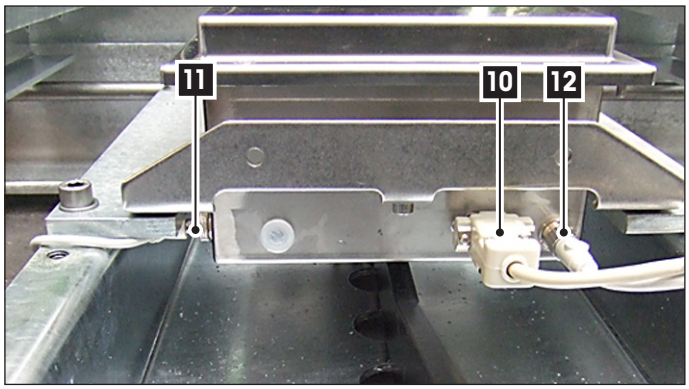
XP155KS, XP604KM, XP1003KM, XP2003KL, XP6002KL

METTLER TOLEDO

Overview: XP-K Comparators







1 Terminal (for details s. Operating Instructions Part 2)
2 Display (Touch-sensitive "Touch Screen")
3 Operating keys
4 SmartSens sensors
5 Type name (on the right, next to the level indicator)
6 Weighing Pan
7 Centering aid
8 Level indicator
9 Leveling screws
10 RS232C serial interface
11 Socket for AC adapter
12 Connector for terminal cable

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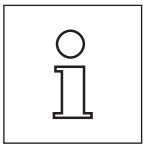
1 Your XP-K Comparator

1.1 Introduction

Thank you for choosing a METTLER TOLEDO balance.



The Operating Instructions for the XP-K Comparators consist of 4 separate documents, whose contents are listed in the following subsections.

1.1.1 Operating Instructions Part 1, this document

Contents: XP-K Comparators

- Introduction
- Safety notes
- Setting up the comparator, Comparator assembly carried out by a METTLER TOLEDO service technician
- Instructions for XP-K Comparators
- Cleaning and service
- Technical data
- Interface commands and MT-SICS functions
- Accessories
- Spare parts

1.1.2 Operating Instructions Part 2, separate document

Content: XP terminal, system and applications

- Basic principles for using the terminal and the software
- System settings
- User-specific settings
- Applications
- Software updates
- Error and status messages
- Conversion table for weight units
- SOP - Standard Operating Procedure
- Recommended printer settings

1.1.3 Operating Instructions Part 3, separate document

Content: XP adjustments and tests

- Adjustments
- Tests

1.1.4 Operating Instructions "WeighCom Application for XP Comparator Balances"

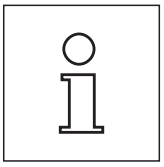
When working with the WeighCom application, use the operating instructions "WeighCom Application for XP Comparator Balances" that were included with the delivery.

1.2 Conventions and symbols used in these operating instructions

The following conventions apply to all operating instructions:

Key designations are indicated by double angular parentheses (e.g. «**On/Off**» or «⇶»).

These symbols indicate safety notes and hazard warnings which, if ignored, can cause personal danger to the user, damage to the balance or other equipment, or malfunctioning of the balance.



This symbol indicates additional information and notes. These make working with your balance easier, as well as ensuring that you use it correctly and economically.

1.3 Safety first

Always operate and use your balance only in accordance with the instructions contained in the manuals.

The instructions for setting up your new balance must be strictly observed.

If the instrument is not used according to the manufacturer's Operating Instructions (part 1, part 2, part 3 and WeighCom Application for XP Comparator Balances), protection of the instrument may be impaired.

It is not permitted to use the balance in hazardous environments.

Use only the AC adapter delivered with your balance, and check that the voltage printed on it is the same as your local power supply voltage. Only plug the adapter into a socket which is grounded.

Do not use sharply pointed objects to operate the keyboard of your balance!

Although your balance is very ruggedly constructed, it is nevertheless a precision instrument. Treat it with corresponding care.

Do not open the balance: It does not contain any parts which can be maintained, repaired, or replaced by the user. If you ever have problems with your balance, contact your METTLER TOLEDO dealer.

Use only balance accessories and peripheral devices from METTLER TOLEDO; they are optimally adapted to your balance.

Disposal

In conformance with the European Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE) this device may not be disposed of in domestic waste.

This also applies to countries outside the EU, per their specific requirements.

Please dispose of this product in accordance with local regulations at the collecting point specified for electrical and electronic equipment.

If you have any questions, please contact the responsible authority or the distributor from which you purchased this device.

Should this device be passed on to other parties (for private or professional use), the content of this regulation must also be related.

Thank you for your contribution to environmental protection.

2 Setting up the comparator

Note: The balance must be disconnected from the power supply when carrying out all setup and mounting work, as well as when the housing of the weighing terminal is opened during everyday operation.

2.1 Standard equipment

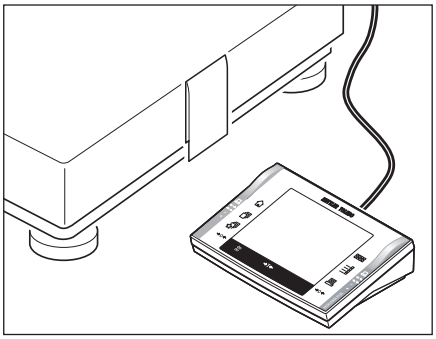
XP-K Comparator

- Weighing platform
- Terminal with wall fixture and protective cover
- Terminal extension cable, length = 4.5 m
- AC adapter and country-specific power cable
- RS232C serial interface
- Operating instructions Part 1 (this document), Part 2 and Part 3
- Operating instructions "WeighCom Application for XP Comparator Balances"
- Production certificate
- CE declaration of conformity

2.2 Setting up the comparator

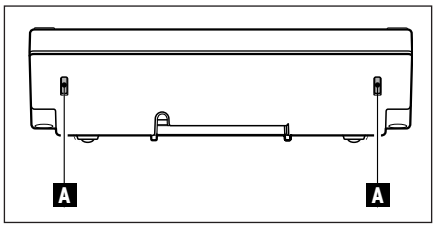
Note: Your new balance will be assembled by a METTLER TOLEDO service technician.

2.2.1 Placing the terminal



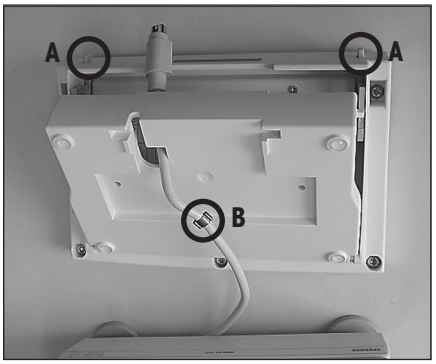
The terminal can either stand freely or be attached to the wall using a wall mount.

2.2.2 Setting the reading angle

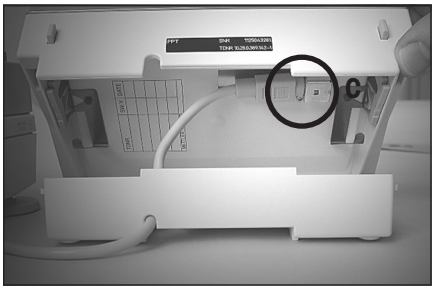


To change the reading angle, press in the two buttons (A) on the back of the terminal. The top of the terminal can then be pulled up or down until it engages in the desired position. A total of 3 setting positions are available.

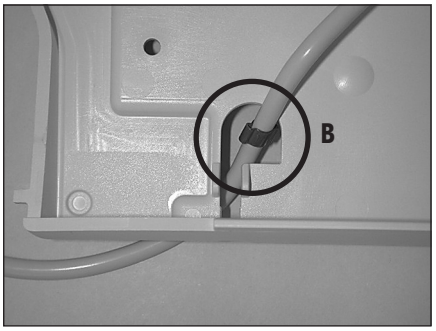
2.2.3 Installing the balance cable in the terminal



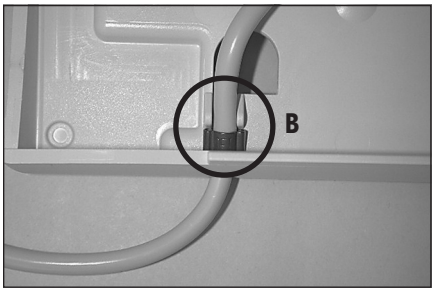
– Place the terminal on the operating surface.
Note: Ensure that a soft, clean surface is used so as not to damage the terminal surface.
– Open the housing by pressing the 2 buttons (A) for adjusting the terminal and swiveling the housing base upwards.
– Pull the cable with the retaining ring (B) through the opening on the housing base (see diagram).



– Return the terminal to its normal position and open it so that the cable can be accessed.
– Insert the cable into the top housing (C).



– Close both parts of the housing until the retaining ring (B) is positioned in the cable opening of the housing base.



– Place the retaining ring (B) behind the two guideways and check that it is secure (tension relief).

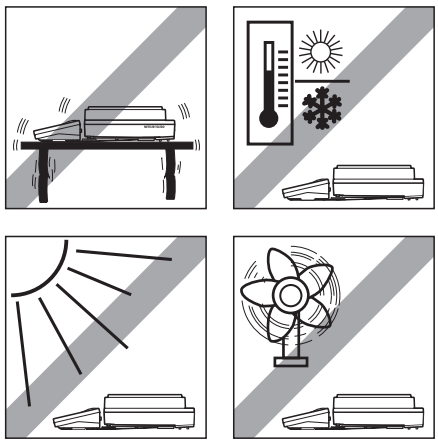
Note: Before closing the housing, always check that the plug is inserted correctly into the terminal plug-in connection.

– Now close the housing by pressing the two buttons (A) for adjusting the terminal until the housing base engages in the top housing.

Setting the reading angle (see Section 2.2.2)

2.3 Selecting the location and leveling the balance

2.3.1 Selecting the location



Select a stable, vibration-free position that is as horizontal as possible. The surface must be able to safely carry the weight of a fully loaded balance.

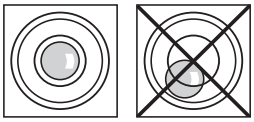
Observe ambient conditions (see Section 5.1).

Avoid the following:

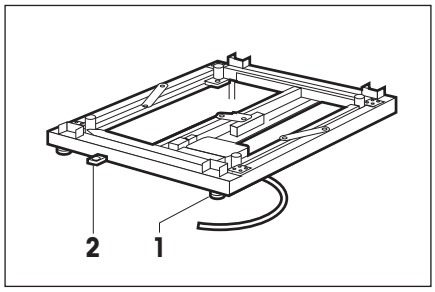
- Direct sunlight
- Powerful drafts (e.g. from fans or air conditioners)
- Excessive temperature fluctuations

2.3.2 Leveling the balance

If the balance is not horizontal from the beginning, it will have to be leveled during initial operation.

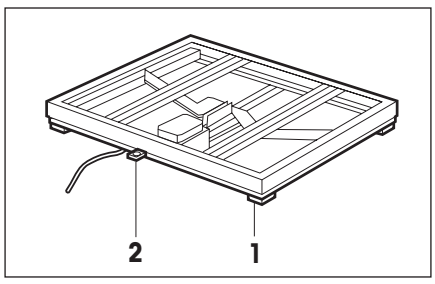


The level is correct when the air bubble lies in the center of the level indicator (2).



XP155KS, XP604KM, XP1003KM:

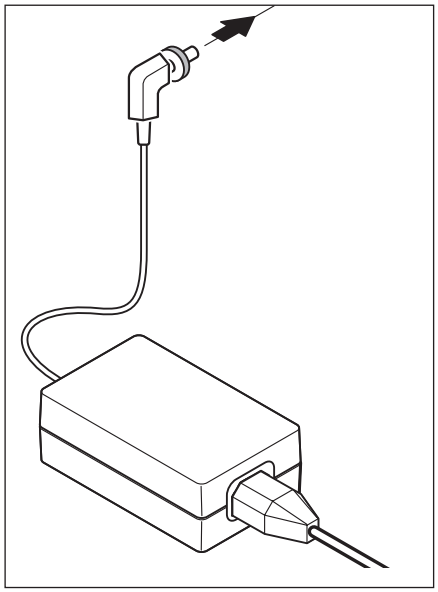
- Level the weighing platform by turning the 4 leveling screws (1).
- Ensure that the leveling screws all sit flat on the floor evenly. Test the stability of the weighing platform by pressing down on or rocking the corners.



XP2003KL, XP6002KL:

- Level the weighing platform by turning the 4 leveling screws (1).
- The leveling screws can be adjusted with a size 30 engineer's wrench.
- Ensure that the leveling screws all sit flat on the floor evenly. Test the stability of the weighing platform by pressing down on or rocking the corners.

2.4 Power supply



Your balance is supplied with an AC adapter and a country-specific power cable. The AC adapter is suitable for all line voltages in the range:

100 - 240 VAC, 50/60 Hz (for exact specifications, see Section 5.1).

First, check to see whether the power plug fits your local power supply (line voltage) connection. **If this is not the case, on no account connect the balance to the power supply**, but contact the responsible METTLER TOLEDO dealer.

Do not connect the balance to outlets that are not grounded! Do not use extension cords without PE conductors!

Connect the AC adapter to the connection socket of your balance (see figure) and to the power supply. Secure the connection to your balance by screwing the plug tight.

Important: Guide the cables so that they cannot become damaged or interfere with the weighing process! Take care that the AC adapter cannot come into contact with liquids!

Once connected to the power supply, the balance performs a self-test and is then ready for operation.

Note: If the display area remains dark, even though the power connection is working, disconnect the balance from the power supply, then check that the terminal cable is inserted correctly (see Section 2.2.3, picture 2).

2.5 Transporting the comparator

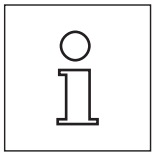
If you wish to change the location, please contact your METTLER TOLEDO dealer.

3 Special instructions for XP-K comparators

To fully utilize the high resolution of the balance, some specific rules must be observed. These will enable you to obtain the best possible results.

3.1 Load the comparator

Because of the high resolution of the balance, even minute differences of temperature or humidity can affect the result. Make sure that the weighing pan is clean and that the weighing sample is acclimatized.



- Always use gloves or working aids that do not damage the weights when loading and unloading the balance.
- When loading the balance you may use aids (e.g. crane) with a maximum speed of 5 mm/sec. A higher speed can have negative influences on the weighing result.

3.2 Settings for the XP-K comparators

3.2.1 Factory setting differences compared to the standard types

AutoZero: Is switched off at initial operation and after a factory reset (resetting to the factory settings), but can be switched on again when required.

When changing over to the "WeighCom" application, "AutoZero" is automatically switched off. When changing back to the "Weighing" application, the previous status of "AutoZero" is restored.

When comparing masses, "AutoZero" must not be switched on, because it can distort the measurement values.

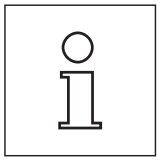
ProFACT: Is switched off at initial operation and after a factory reset (resetting to the factory settings). When comparing masses, it is not advisable to switch "ProFACT" on.

4 Cleaning and service

Every now and then, clean the weighing pan, housing and terminal of your balance using a damp cloth. Your balance is made from high-quality, durable materials and can therefore be cleaned with a standard, mild cleaning agent.

Please observe the following notes

- On no account use cleaning agents, which contain solvents or abrasive ingredients, as this can result in damage to the terminal overlay.
- Ensure that no liquid comes into contact with the balance, the terminal or the AC adapter.
- Never open the balance or the terminal! They contain no components, which can be cleaned, repaired or replaced by the user.



Please contact your METTLER TOLEDO dealer for details of the available service options. Regular servicing by an authorized service engineer ensures constant accuracy for years to come and prolongs the service life of your balance.

5 Technical data

In this Section you will find the most important technical data for your comparator.

5.1 General data

Power supply

- Power supply connector with AC/DC adapter: 11107909
  Primary: 100-240VAC, -15%/+10%, 50/60Hz
  Secondary: 12VDC ± 3%, 2 .0 A (with electronic overload protection)
- Cable to AC adapter: 3-core, with country-specific plug
- Power supply to the balance: 12VDC ± 3%, 2 .0 A, maximum ripple: 80mVDCpp

  Use only with a tested AC adapter with SELV output current.
  Ensure correct polarity

Protection and standards

- Overvoltage category: Class II
- Degree of pollution: 2
- Protection: Protected against dust and water, IP44 in use with weighing pan inserted
- Standards for safety and EMC: See Declaration of Conformity (separate brochure 11780294)
- Range of application: For use only in closed interior rooms

Environmental conditions

- Height above mean sea level: Up to 4000 m
- Ambient temperature: 10 - 30 °C ± 0.7 °C / 1 h, or ± 1.0 °C / 12 h respectively
- Relative air humidity: 40 at 70 % ±10 % / 4 h

Materials

- Weighing platform: XP155KS, XP604KM, XP1003KM: Chrome steel X5 Cr Ni 18 10, laquered and plastic
  XP2003KL, XP6002KL: Galvanized steel, laquered and plastic
- Terminal: Die-cast zinc, chromed and plastic
- Weighing pan: Chrome-nickel steel X5 Cr Ni 18 10

5.1.1 Explanatory notes for the METTLER TOLEDO AC adapter

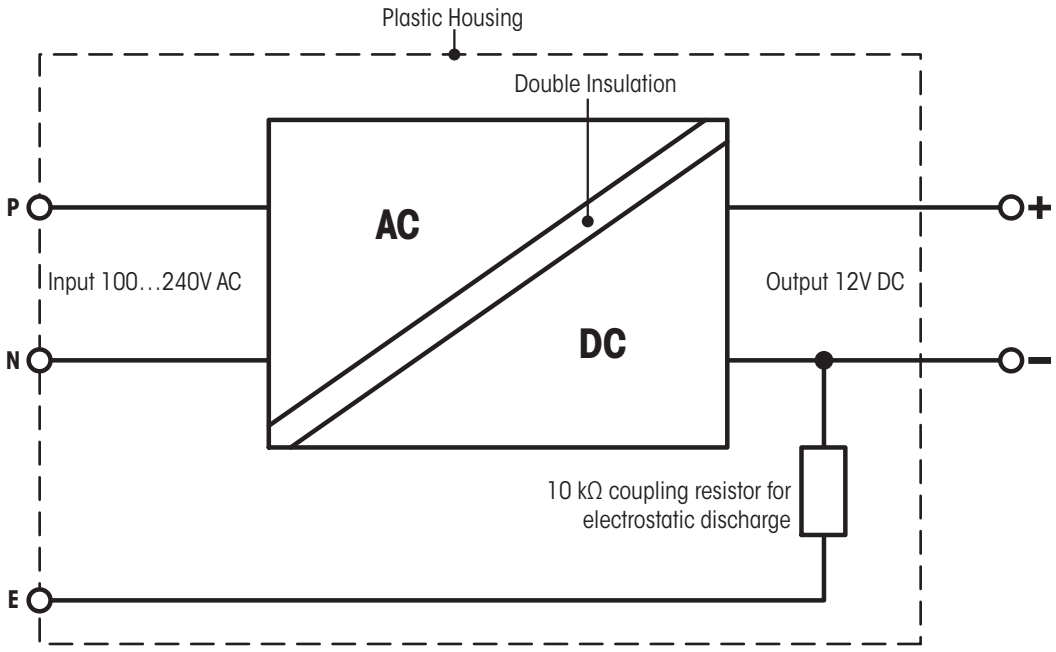
The certified external power supply which conforms to the requirements for Class II double insulated equipment is not provided with a protective earth connection but with a functional earth connection for EMC puposes. This earth connection IS NOT a safety feature. Further information about conformance of our products can be found in the brochure "Declaration of Conformity" which is coming with each product or can be downloaded from www.mt.com.

Consequently an earth bonding test is not required. Similarly it is not necessary to carry out an earth bonding test between the supply earth conductor and any exposed metalwork on the balance.

In case of testing with regard to the directive 2001/95/CE the power supply and the balance has to be handled as Class II double insulated equipment.

Because balances can be sensitive to static charges a leakage resistor, typically 10 kΩ, is connected between the earth connector and the power supply output terminals. The arrangement is shown in the figure below. This resistor is not part of the electrical safety arrangement and does not require testing at regular intervals.

Equivalent circuit diagram:



5.2 Model-specific data

Technical data (limit values)

Model	XP155KS	XP604KM	XP1003KM	XP2003KL	XP6002KL
Maximum load	150 kg	600 kg	1100 kg	2500 kg	5400 kg
Readability	0.05 g	0.1 g	0.5 g	1 g	10 g
Repeatability at nominal load (ABA, measured at) [1]	0.12 g (100 kg)	0.23 g (500 kg)	1.5 g (1000 kg)	7 g (2000 kg)	70 g (5000 kg)
Repeatability at low load (ABA, measured at) [1]	0.09 g (5 kg)	0.15 g (20 kg)	1.0 g (50 kg)	4 g (100 kg)	50 g (500 kg)
Repeatability absolute (Full range)	0.15 g (100 kg)	0.3 g (500 kg)	2 g (1000 kg)	10 g (2000 kg)	100 g (5000 kg)
Electrical weighing range	0…150 kg	0…600 kg	0…1100 kg	0…2500 kg	0…5400 kg
Taring range	150 kg	600 kg	1100 kg	2500 kg	5400 kg
Pre-load with fullrange	0…125 kg	0…480 kg	0…100 kg	0…150 kg	0…440 kg
Linearity (electrical weighing range)	2.0 g (100 kg)	10 g (500 kg)	20 g (1000 kg)	100 g (2000 kg)	300 g (5000 kg)
Eccentric load deviation (measured at) [2]	5 g (50 kg)	40 g (200 kg)	40 g (200 kg)	120 g (1000 kg)	240 g (2000 kg)
Sensitivity offset	$1 \times 10^{-5} \cdot R_{nt}$	$1 \times 10^{-5} \cdot R_{nt}$	$1 \times 10^{-5} \cdot R_{nt}$	$1 \times 10^{-5} \cdot R_{nt}$	$1 \times 10^{-5} \cdot R_{nt}$
Sensitivity temperatur drift [3]	$3 \times 10^{-6}/°C \cdot R_{nt}$	$3 \times 10^{-6}/°C \cdot R_{nt}$	$3 \times 10^{-6}/°C \cdot R_{nt}$	$3 \times 10^{-6}/°C \cdot R_{nt}$	$3 \times 10^{-6}/°C \cdot R_{nt}$
Sensitivity stability [4]	$1.5 \times 10^{-5}/a \cdot R_{nt}$	$1.5 \times 10^{-5}/a \cdot R_{nt}$	$1.5 \times 10^{-5}/a \cdot R_{nt}$	$1.5 \times 10^{-5}/a \cdot R_{nt}$	$1.5 \times 10^{-5}/a \cdot R_{nt}$
Settling time	5 s	5 s	5 s	5 s	5 s
Weighing time, 1 ABA measurement [5]	36…45 s	36…45 s	36…45 s	36…45 s	36…45 s
Interface update rate	23 /s	23 /s	23 /s	23 /s	23 /s
Internal adjustment weights	2	2	2	2	2
Adjustment built in	proFACT	proFACT	proFACT	proFACT	proFACT
Measuring range of the external adjustment weights	50…150 kg	200…600 kg	200…1000 kg	500…2500 kg	1000…5000 kg
Weighing platform dimensions (W x D x H) [mm]	800 x 600 x 130	1000 x 800 x 115	1000 x 800 x 115	1500 x 1250 x 182	1500 x 1250 x 182
Terminal dimensions (W x D x H) [mm]	194 x 133 x 71	194 x 133 x 71	194 x 133 x 71	194 x 133 x 71	194 x 133 x 71
Weighing pan dimensions (W x D) [mm]	800 x 600	1000 x 800	1000 x 800	1500 x 1250	1500 x 1250
Weight [kg]	54	93	93	382	382

Typical data for determination of the measurement uncertainty

Model	XP155KS	XP604KM	XP1003KM	XP2003KL	XP6002KL
Repeatability at nominal load (ABA, measured at) [1] typical	0.09 g (100 kg)	0.18 g (500 kg)	1.0 g (1000 kg)	5.5 g (2000 kg)	60 g (5000 kg)
Repeatability at low load (ABA, measured at) [1] typical	0.06 g (5 kg)	0.11 g (20 kg)	0.6 g (50 kg)	3.0 g (100 kg)	40 g (500 kg)
Repeatability (sd) typical	$0.06\ g + 3.2 \times 10\text{-}7 \cdot R_{gr}$	$0.11\ g + 6.3 \times 10\text{-}8 \cdot R_{gr}$	$0.6\ g + 4.2 \times 10\text{-}7 \cdot R_{gr}$	$3.0\ g + 1.3 \times 10\text{-}6 \cdot R_{gr}$	$40\ g + 4.2 \times 10\text{-}6 \cdot R_{gr}$
Differential nonlinearity (sd) typical	$\sqrt{5 \times 10^{-12}\ g \cdot R_{nt}}$	$\sqrt{5 \times 10^{-12}\ g \cdot R_{nt}}$	$\sqrt{5 \times 10^{-12}\ g \cdot R_{nt}}$	$\sqrt{5 \times 10^{-12}\ g \cdot R_{nt}}$	$\sqrt{5 \times 10^{-12}\ g \cdot R_{nt}}$
Differential eccentric load deviation (sd) typical	$1.2 \times 10^{-5} \cdot R_{nt}$	$1.2 \times 10^{-5} \cdot R_{nt}$	$1.2 \times 10^{-5} \cdot R_{nt}$	$3.3 \times 10^{-5} \cdot R_{nt}$	$4.0 \times 10^{-5} \cdot R_{nt}$
Sensitivity offset (sd) typical [3]	$2 \times 10^{-6} \cdot R_{nt}$	$2 \times 10^{-6} \cdot R_{nt}$	$2 \times 10^{-6} \cdot R_{nt}$	$3 \times 10^{-6} \cdot R_{nt}$	$3 \times 10^{-6} \cdot R_{nt}$
Minimum weight (1%, 2sd) typical	$12\ g + 4.2 \times 10^{-5} \cdot R_{gr}$	$22\ g + 2.4 \times 10^{-5} \cdot R_{gr}$	$120\ g + 7.6 \times 10^{-5} \cdot R_{gr}$	$600\ g + 2 \times 10^{-4} \cdot R_{gr}$	$8000\ g + 7.8 \times 10^{-4} \cdot R_{gr}$

R_{gr} = gross weight

R_{nt} = net weight (sample weight)

sd = Standard deviation

a = Year (annum)

[1] Value out of 5 ABA measurements according to OIML R111

[2] According to OIML R76

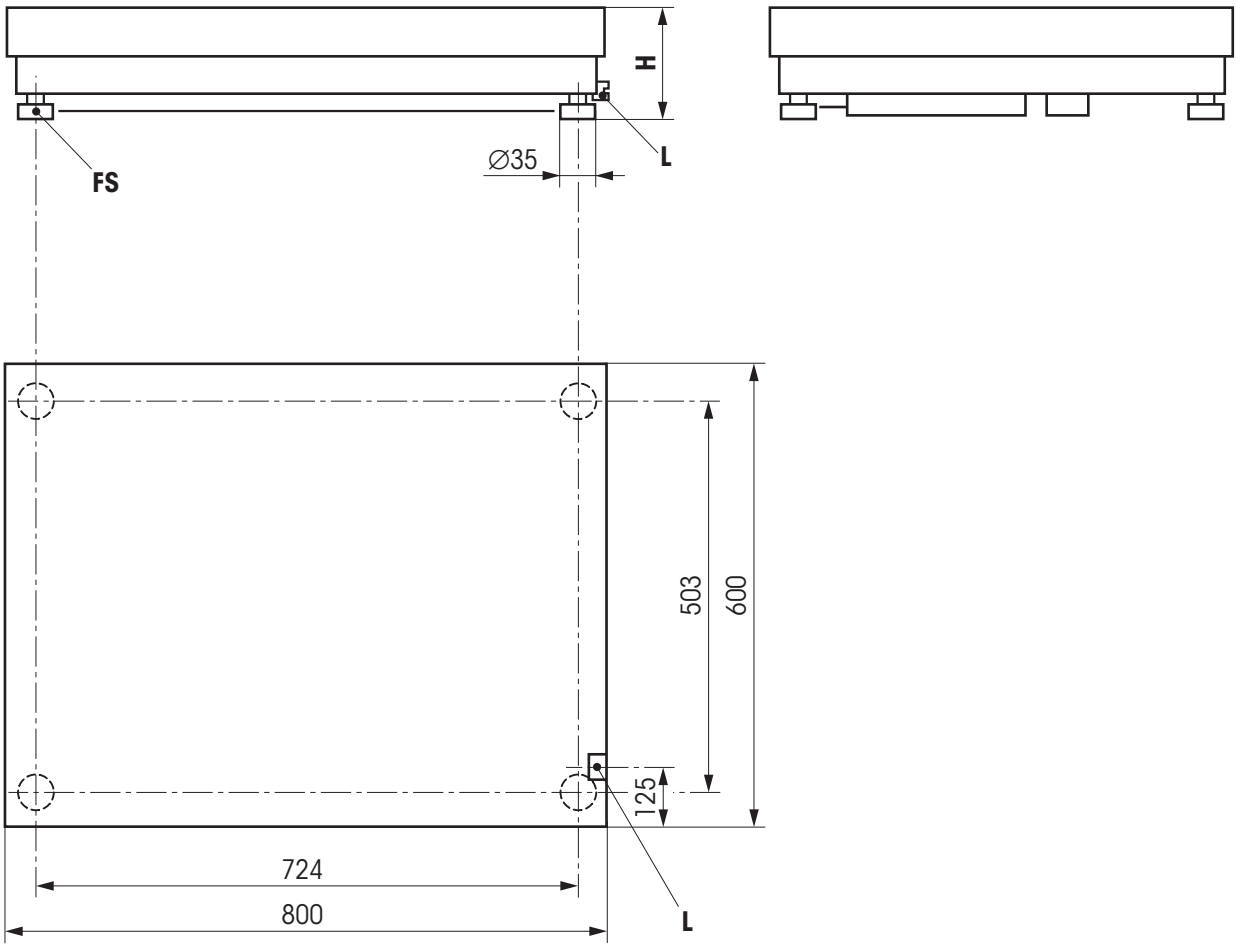
[3] In the temperature range 10…30 °C

[4] Sensitivity drift/year after putting into operation for the first time, with the ProFACT self-calibration function activated

[5] Weighing time without loading

5.3 Dimensions XP155KS

Dimensions in mm



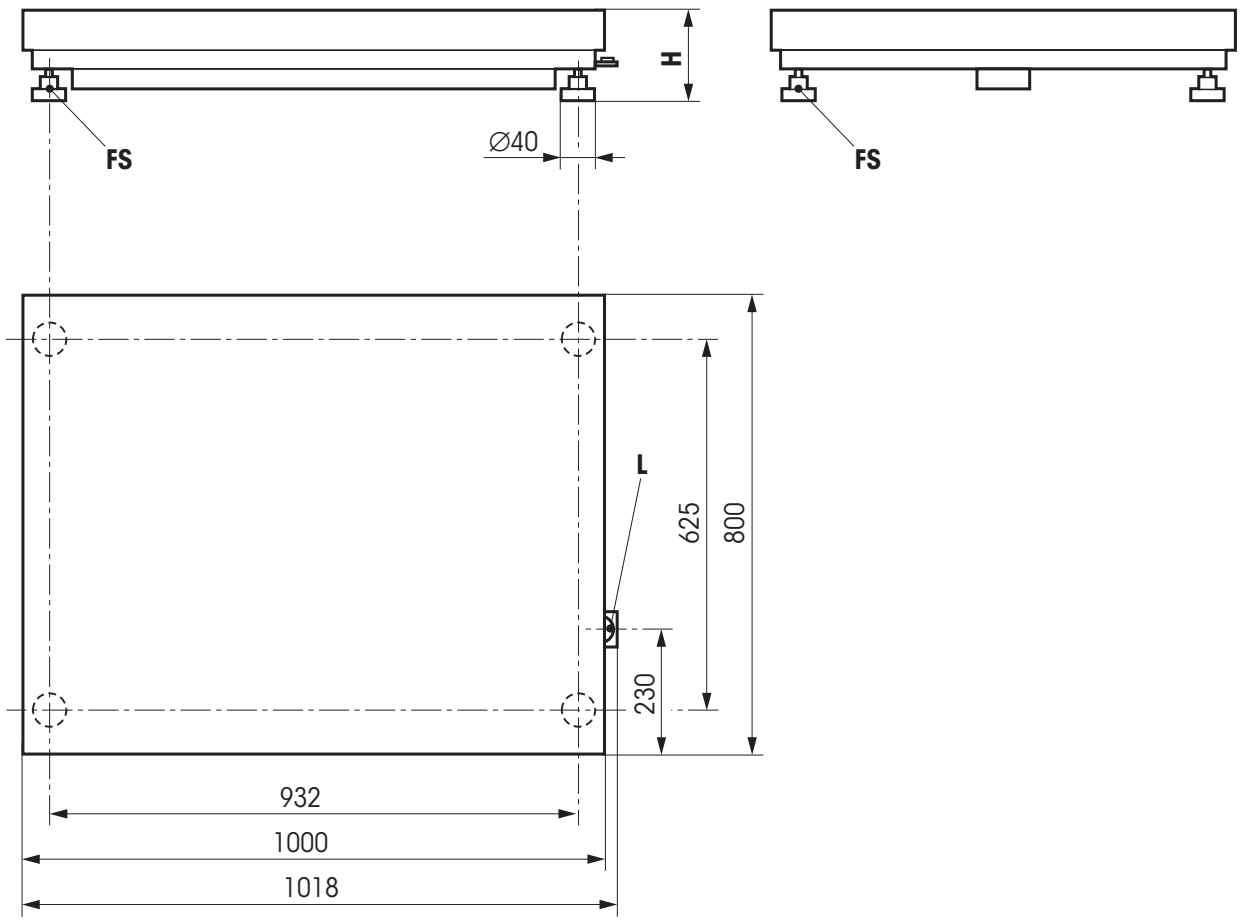
FS = Leveling screw
Footprint D = ∅ 35 mm
Size = 17 mm

H = Height adjustable with 4 leveling screws
H min. = 130 mm
H max. = 155 mm

L = Level indicator

5.4 Dimensions XP604KM, XP1003KM

Dimensions in mm



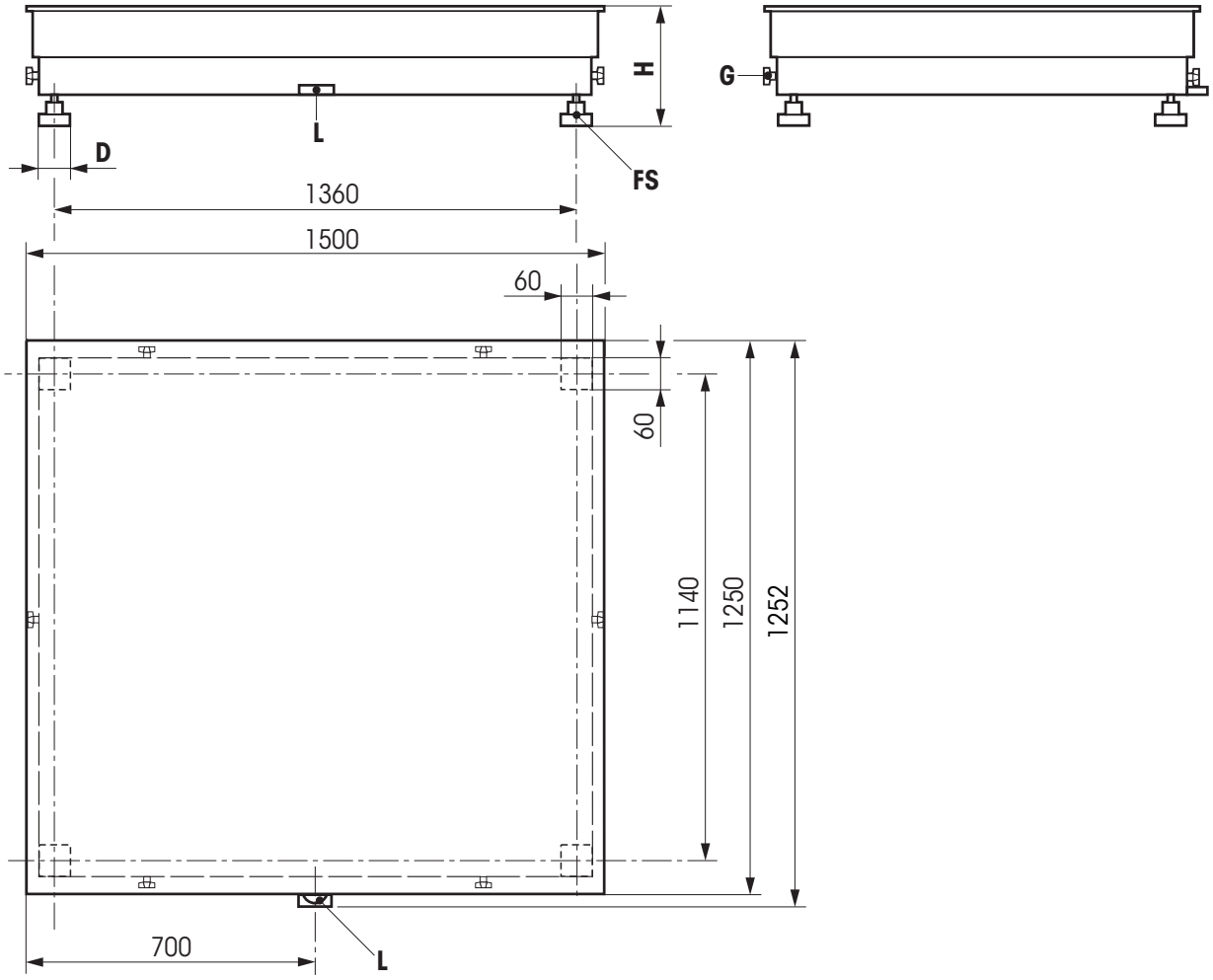
FS = Leveling screw
Footprint D = ∅ 40 mm
Size = 19 mm

H = Height adjustable with 4 leveling screws
H min. = 115 mm
H max. = 140 mm

L = Level indicator

5.5 Dimensions XP2003KL, XP6002KL

Dimensions in mm



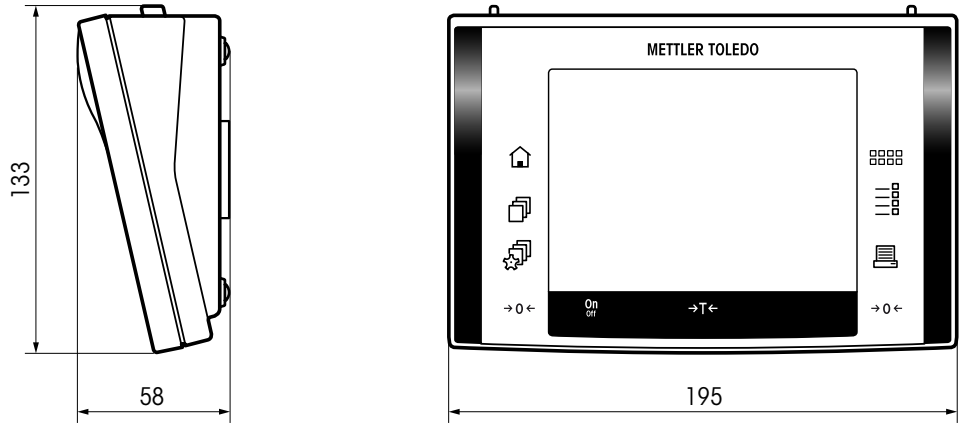
FS = Leveling screw
Footprint D = 60 mm x 60 mm
Size = 30 mm

H = Height adjustable with 4 leveling screws
H min. = 182 mm
H max. = 207 mm

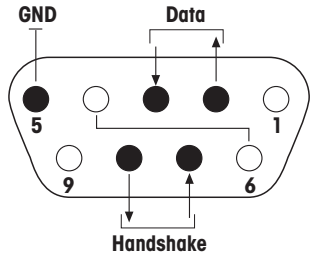
L = Level indicator

5.6 Dimensions Terminal

Dimensions in mm



5.7 Specifications of the RS232C interface

Interface type:	Voltage interface according to EIA RS-232C/DIN 66020 (CCITT V24/V.28)
Max. cable length:	15m
Signal level:	Outputs: Inputs: +5V ... +15V (RL = 3 – 7kΩ) +3V ... 25V –5V ... –15V (RL = 3 – 7kΩ) –3V ... 25V
Connector:	Sub-D, 9-pole, female
Operating mode:	Full duplex
Transmission mode:	Bit-serial, asynchronous
Transmission code:	ASCII
Baud rates:	600, 1200, 2400, 4800, 9600, 19200, 38400[1)] (software selectable)
Bits/parity:	7-bit/even, 7-bit/odd, 7-bit/none, 8-bit/none (software selectable)
Stop bits:	1 stop bit
Handshake:	None, XON/XOFF, RTS/CTS (software selectable)
End-of-line:	<CR><LF>, <CR>, <LF> software selectable)
	Pin 2: Balance transmit line (TxD) Pin 3: Balance receive line (RxD)) Pin 5: Ground signal (GND) Pin 7: Clear to send (hardware handshake) (CTS) Pin 8: Request to send (hardware handshake) (RTS)

[1)] 38400 baud is only possible in special cases, such as:

- Weighing platform without terminal.

5.8 MT-SICS Interface commands and functions

Many of the balances and scales used have to be capable of integration in a complex computer or data acquisition system.
To enable you to integrate balances in your system in a simple manner and utilize their capabilities to the full, most balance functions are also available as appropriate commands via the data interface.
All new METTLER TOLEDO balances launched on the market support the standardized command set "METTLER TOLEDO Standard Interface Command Set" (MT-SICS). The commands available depend on the functionality of the balance.

Basic information on data interchange with the balance

The balance receives commands from the system and acknowledges the command with an appropriate response.

Command formats

Commands sent to the balance comprise one or more characters of the ASCII character set. Here, the following must be noted:

- Enter commands only in uppercase.
- The possible parameters of the command must be separated from one another and from the command name by a space (ASCII 32 dec., in this description represented as ␣).
- The possible input for "text" is a sequence of characters of the 8-bit ASCII character set from 32 dec to 255 dec.
  Note: For language-specific characters, please see the information in the "Operating Instructions, Part 2".
- Each command must be closed by CRLF (ASCII 13 dec., 10 dec.).

The characters C_RL_F, which can be inputted using the Enter or Return key of most entry keypads, are not listed in this description, but it is essential they be included for communication with the balance.

Example

S – Send stable weight value

Command	`S`	Send the current stable net weight value.
Response	`S␣S␣WeightValue␣Unit`	
		Current stable weight value in unit actually set under unit 1.
	`S␣I`	Command not executable (balance is currently executing another command, e.g. taring, or timeout as stability was not reached).
	`S␣+`	Balance in overload range.
	`S␣-`	Balance in underload range.

Example

Command	`S`	Send a stable weight value.
Response	`S␣S␣␣␣␣␣100.00␣g`	
		The current, stable weight value is 100.00 g

The MT-SICS commands listed below are the commands used most often. For additional commands and further information please refer to the Reference Manual "MT-SICS for Excellence Plus series 11780711" downloadable from the Internet under "**www.mt.com**".

S – Send stable weight value

Command	`S`	Send the current stable net weight value.

SI – Send value immediately

Command	`SI`	Send the current net weight value, irrespective of balance stability.

SIR – Send weight value immediately and repeat

Command	`SIR`	Send the net weight values repeatedly, irrespective of balance stability.

Z – Zero

Command	`Z`	Zero the balance.

@ – Reset

Command	`@`	Resets the balance to the condition found after switching on, but without a zero setting being performed.

SR – Send weight value on weight change (Send and Repeat)

Command	`SR`	Send the current stable weight value and then send continuously the stable weight value after every weight change. The weight change must be at least 12.5 % of the last stable weight value, minimum = 30 d.

ST – Send stable weight after pressing «🖶» key

Command	`ST␣1`	Send the current stable net weight value each time when «🖶» is pressed.
Response	`ST␣0`	Stop sending weight value when «🖶» is pressed. • **ST** function is not active: – after switching on the balance. – after the "Reset" command.

SU – Send stable weight value with currently displayed unit

Command	`SU`	As the "**S**" command, but with the currently displayed unit.

6 Accessories and spare parts

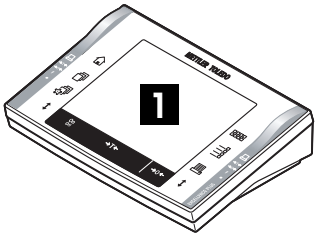
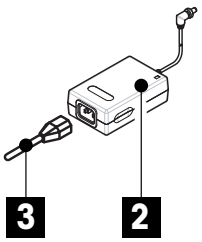
6.1 Accessories

You can increase the functionality of your balance with accessories from the METTLER TOLEDO range. The following options are available:

	Description	Part No.
	Printers	
	RS-P42: Printer with connection cable RS232, for recording results	00229265
	Cables for RS232C interface	
	RS9 – RS9 (m/f), connection cable for computer or RS-P42 printer, length = 1 m	11101051
	RS9 – RS25 (m/f), connection cable for computer (IBM XT or compatible), length = 2 m	11101052
	RS9 – RS9 (m/m): connection cable for devices with DB9 socket (f), length = 1 m	21250066
	Auxiliary displays (displays only the weight value and unit, if defined)	
	RS/LC-BLD: Auxiliary display with RS232 & LC connection and external power supply, with table stand	00224200
	RS/LC-BLDS: Auxiliary display with RS232 & LC connection for table stand or balance stand	11132630
	LC-AD: Auxiliary display, active, with table stand	00229140
	LC-ADS: Auxiliary display, active, with high table stand	00229150
	IND690 Terminal	22011901
	Input/output devices	
	Barcode reader RS232	21900879
	• AC adapter 230 V EUR	21900882
	• AC adapter 115 V USA	21900883
	Software	
	MC Link; Windows® software for comparative weighing	11116504
	LabX pro balance (network capable solution for management of weighing data)	11120301
	LabX light balance (management of weighing data made easy)	11120317
	LabX direct balance (simple data transfer)	11120340
	Freeweigh. Net	21900895
	Reference weights	
	Reference weight F1 50 kg certified	00158741
	Reference weight F1 100 kg certified	On request
	Reference weight F1 500 kg certified	On request
	Reference weight F1 1000 kg certified	On request
	Reference weight F1 2000 kg certified	On request

	Description	Part No.
	Various	
	Protective cover for XP terminal	11132570
	Draftshield XP-WKS for XP155KS	11116556
	Draftshield XP-WKM for XP604KM and XP1003KM	11116557
	Draftshield XP-WKL for XP2003KL and XP6002KL	11116558
	LevelMatic 1000 for XP155KS and XP604KM	22001940
	LevelMatic 5000 for XP1003KM, XP2003KL and XP6002KL	11116554

6.2 Spare parts

Spare parts XP-K Comparators	Item	Designation	No.
	1	Terminal complete with software	11130837
	2	AC adapter	11107909
	3	Power cable	
		DK	00087452
		GB	00089405
		USA	00088668
		AUS	00088751
		SA	00089728
		EU (Schuko)	00087925
		CH	00087920
		I	00087457
			

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